

FILEID**MTHGFLOOR

H 12

MT
1-

MM	MM	TTTTTTTTTT	HH	HH	GGGGGGGG	FFFFFFFFF	LL	000000	000000	RRRRRRRR	
MM	MM	TTTTTTTTTT	HH	HH	GGGGGGGG	FFFFFFFFF	LL	000000	000000	RRRRRRRR	
MMMM	MMMM	TT	HH	HH	GG	FF	LL	00	00	RR	RR
MMMM	MMMM	TT	HH	HH	GG	FF	LL	00	00	RR	RR
MM	MM	TT	HH	HH	GG	FF	LL	00	00	RR	RR
MM	MM	TT	HH	HH	GG	FF	LL	00	00	RR	RR
MM	MM	TT	HHHHHHHHHH	GG	FFFFFFF	FF	LL	00	00	RRRRRRRR	
MM	MM	TT	HHHHHHHHHH	GG	FFFFFFF	FF	LL	00	00	RRRRRRRR	
MM	MM	TT	HH	HH	GG	GGGGGG	FF	00	00	RR	RR
MM	MM	TT	HH	HH	GG	GGGGGG	FF	00	00	RR	RR
MM	MM	TT	HH	HH	GG	GG	FF	00	00	RR	RR
MM	MM	TT	HH	HH	GG	GG	FF	00	00	RR	RR
MM	MM	TT	HH	HH	GGGGGG	FF	LLLLLLLL	000000	000000	RR	RR
MM	MM	TT	HH	HH	GGGGGG	FF	LLLLLLLL	000000	000000	RR	RR

LL		SSSSSSSS
LL		SSSSSSSS
LL		SS
LL		SS
LL		SS
LL		SSSSSS
LL		SSSSSS
LL		SS
LLLLLLLL		SSSSSSSS
LLLLLLLL		SSSSSSSS

(2) 48
(3) 78
(4) 136

DECLARATIONS
MTH\$GFLLOOR - greatest integer G_floating routine
MTH\$GFLLOOR_R3 - greatest integer G_floating routine

```
0000 1 .TITLE MTH$GFLLOOR - Greatest integer routine for G_floating
0000 2 :IDENT /1-001/ ; File: MTHGFLLOOR.MAR
0000 3
0000 4
0000 5 ****
0000 6 *
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0000 24 *
0000 25 *
0000 26 ****
0000 27
0000 28
0000 29 ++
0000 30 :FACILITY: Math Library
0000 31
0000 32 :ABSTRACT:
0000 33
0000 34     This routine finds the largest integer less than the input
0000 35     value, i.e. it truncates toward negative infinity
0000 36     for data type G_floating.
0000 37
0000 38 :ENVIRONMENT: User Mode, AST Reentrant
0000 39
0000 40 --
0000 41 :Author: John Sauter, Creation date: 27-JUL-1979
0000 42
0000 43 :MODIFIED BY:
0000 44
0000 45 :VERSION 00
0000 46 : 1-001 - Original, from MTH$DFLOOR.
```

0000 48 .SBttl DECLARATIONS
0000 49 ;
0000 50 : INCLUDE FILES:
0000 51 ;
0000 52 ;
0000 53 ;
0000 54 : EXTERNAL DECLARATIONS:
0000 55 ;
0000 56 .DSABL GBL ; Prevent undeclared
0000 57 ; symbols from being
0000 58 ; automatically global.
0000 59 ;
0000 60 : MACROS:
0000 61 ;
0000 62 ;
0000 63 ;
0000 64 : EQUATED SYMBOLS:
0000 65 ;
0000 66 ;
0000 67 ;
0000 68 : OWN STORAGE:
0000 69 ;
0000 70 ;
0000 71 ;
0000 72 : PSECT DECLARATIONS:
0000 73 ;
00000000 74 .PSECT _MTH\$CODE PIC, USR, CON, REL, LCL, SHR, -
0000 75 EXE, RD, NOWRT, LONG
0000 76

0000 78 .SBTTL MTH\$GFLLOOR - greatest integer G_floating routine
 0000 79 :++
 0000 80 : FUNCTIONAL DESCRIPTION:
 0000 81 :
 0000 82 : This routine finds the floor by truncating, and then if the
 0000 83 : input value is negative and not an integer subtracting 1.
 0000 84 :
 0000 85 : CALLING SEQUENCE:
 0000 86 :
 0000 87 : CALL result_int.wg.v = MTH\$GFLLOOR (input.rg.r)
 0000 88 :
 0000 89 : INPUT PARAMETERS:
 0000 90 :
 0000 91 : input_addr = 4 ; address of the G_floating number
 0000 92 : ; to get the floor of
 0000 93 :
 0000 94 : IMPLICIT INPUTS:
 0000 95 :
 0000 96 : NONE
 0000 97 :
 0000 98 : OUTPUT PARAMETERS:
 0000 99 :
 0000 100 : NONE
 0000 101 :
 0000 102 : IMPLICIT OUTPUTS:
 0000 103 :
 0000 104 : NONE
 0000 105 :
 0000 106 : FUNCTION VALUE:
 0000 107 : COMPLETION CODES:
 0000 108 :
 0000 109 : the G_floating value of the greatest integer
 0000 110 :
 0000 111 : SIDE EFFECTS:
 0000 112 :
 0000 113 : NONE
 0000 114 :
 0000 115 :--
 0000 116 :
 0000 117 :.ENTRY MTH\$GFLLOOR, ^M<R2, R3> ; entry point
 0000 118 :
 52 52 08 50 04 BC 50FD 0002 119 : MOVG ainput_addr(AP), R0 ; R0/R1 = input argument
 52 52 00 50 54FD 0007 120 : EMODG R0, #0, #1, R2, R2 ; R2/R3 = fraction_part (arg)
 52 52 42FD 000E 121 : SUBG2 R2, R0 ; R0/R1 = integer_part (arg)
 09 14 0012 122 :
 0012 123 : BGTR 40\$; if > 0, have correct answer
 0014 124 :
 52 53FD 0014 125 : TSTG R2 ; look at fraction part
 04 18 0017 126 : BGEQ 40\$; if > 0 then 0 < input < 1 and
 0019 127 : ; we have the correct answer
 0019 128 : ; if = 0 then input was integer
 0019 129 : ; and we have correct answer
 0019 130 :
 50 08 42FD 0019 131 : SUBG2 #1,R0 ; subtract 1 from truncated
 001D 132 :
 001D 133 :
 04 001D 134 40\$: RET ; negative non-integer

001E 136 .SBTTL MTHSGFLOOR_R3 - greatest integer G_floating routine
 001E 137 ++
 001E 138 FUNCTIONAL DESCRIPTION:
 001E 139
 001E 140 This is the JSB entry point to MTHSGFLOOR.
 001E 141
 001E 142 CALLING SEQUENCE:
 001E 143
 001E 144 JSB result_int.wg.v = MTHSGFLOOR_R3 (input.rg.v)
 001E 145
 001E 146 INPUT PARAMETERS:
 001E 147
 001E 148 R0 and R1 contain the input value
 001E 149
 001E 150 IMPLICIT INPUTS:
 001E 151
 001E 152 NONE
 001E 153
 001E 154 OUTPUT PARAMETERS:
 001E 155
 001E 156 NONE
 001E 157
 001E 158 IMPLICIT OUTPUTS:
 001E 159
 001E 160 NONE
 001E 161
 001E 162 FUNCTION VALUE:
 001E 163 COMPLETION CODES:
 001E 164
 001E 165 the G_floating value of the greatest integer
 001E 166
 001E 167 SIDE EFFECTS:
 001E 168
 001E 169 NONE
 001E 170
 001E 171 ;--
 001E 172
 001E 173 MTHSGFLOOR_R3:: : entry point
 001E 174
 52 52 08 00 50 54FD 001E 175 EMODG R0, #0, #1, R2, R2 : R2/R3 = fraction_part (arg)
 50 52 42FD 0025 176 SUBG2 R2, R0 : R0/R1 = integer_part (arg)
 09 14 0029 177
 52 53FD 002B 178 BGTR 40\$: if > 0, have correct answer
 04 18 002E 179
 0030 180 TSTG R2 : look at fraction part
 0030 181 BGEQ 40\$: if > 0 then 0 < input < 1 and
 0030 182 : we have the correct answer
 0030 183 : if = 0 then input was integer
 0030 184 : and we have correct answer
 50 08 42FD 0030 185
 0034 186 SUBG2 #1,R0 : subtract 1 from truncated
 0034 187 : negative non-integer
 05 0034 188 40\$: RSB
 0035 189
 0035 190 .END
 0035 191

MTHSGFLOOR Symbol table

- Greatest integer routine for G_floatin N 12 16-SEP-1984 01:27:29 VAX/VMS Macro V04-00
6-SEP-1984 11:23:41 [MTHRTL.SRC]MTHGFLOR.MAR;1 Page 5 (4)

INPUT_ADDR = 00000004
MTHSGFLLOOR 00000000 RG 01
MTHSGFLLOOR_R3 0000001E RG 01

! Psect synopsis !

PSECT name

Allocation	PSECT No.	Attributes
00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
00000035 (53.)	01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

1000 J. Neurosci., November 1, 2006 • 26(44):9992–10003

! Performance indicators !

Phase

Page faults	CPU Time	Elapsed Time
29	00:00:00.11	00:00:01.10
117	00:00:00.44	00:00:03.29
76	00:00:00.50	00:00:02.14
0	00:00:00.00	00:00:00.00
45	00:00:00.40	00:00:02.01
2	00:00:00.01	00:00:00.01
2	00:00:00.02	00:00:00.02
0	00:00:00.00	00:00:00.00
273	00:00:01.48	00:00:08.62

The working set limit was 900 pages.

2047 bytes (4 pages) of virtual memory were used to buffer the intermediate code.

There were 10 pages of symbol table space allocated to hold 3 non-local and 2 local symbols.

191 source lines were read in Pass 1, producing 11 object records in Pass 2.

0 pages of virtual memory were used to define 0 macros.

Macro library statistics

Macro Library name

Macros defined

\$255\$DUA2B:[SYSLIB]STARLET.MLB:2

0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:MTHGFLLOOR/OBJ=OBJ\$:MTHGFLLOOR MSRC\$:MTHGFLLOOR/UPDATE=(ENHS:MTHGFLLOOR)

0260 AH-BT13A-SE
VAX/VMS V4.0

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